

Adapting to the Times:

The Evolution of U.S. Threat Reduction Programs

U.S. threat reduction efforts, which originated in response to the collapse of the Soviet Union, have aimed to prevent the spread of Soviet-era weapons of mass destruction (WMD) and their associated material and know-how through a variety of efforts, including weapons dismantlement, fissile material control, and scientist redirection. Historically, these efforts have rested heavily on building personal relationships with scientists and institutional leaders.

In the future, however, efforts should focus increasingly on engaging countries as global partners in security dialogues that may be different from those in the past while building on the many lessons learned. Many countries around the world are facing unique challenges and are at the nexus of transnational terror-

ist threats, biosciences capacity building, infectious disease epidemics, and WMD-usable materials and expertise.

The evolving Cooperative Threat Reduction (CTR) programs need to be nimble, culturally sensitive, able to respond quickly, and capable of engaging with countries that are at the front

lines of this new threat landscape. As the tools employed to combat new global threats mature, the United States and its partners must continually assess and evaluate the strategies that will lead to a stable, sustainable international CTR framework. The continued success of threat reduction programs hinges on their ability to adapt to emerging threats beyond Russia and the other former Soviet states.

In general, there should be an increase in outreach to countries across the globe—for example in Africa, where the United States is increasingly interested in being engaged and has begun initial activities. This article addresses some of the particular challenges and opportunities for future CTR activity there and elsewhere. It also describes the potential new partnerships, engagements, and relationship building that may be developed through joint efforts to address today's threats to global security.

As the original CTR programs approach the end of their second decade of work, there is a growing recognition that today's threats are more global. Yet, these threats are decentralized at times, and they do not emanate from states alone. Threat reduction programs increasingly must acknowledge that

Bonnie Jenkins is coordinator for Cooperative Threat Reduction programs in the Department of State. She previously served as program officer for U.S. foreign and security policy at the Ford Foundation and as counsel on the National Commission on Terrorist Attacks Upon the United States, more commonly known as the 9/11 Commission.

Cooperative Threat Reduction: A Historical Perspective

A 2009 National Academy of Sciences report¹ and the 2010 “Nuclear Posture Review Report”² both recommend a robust Cooperative Threat Reduction (CTR) program as a key element in the strategy to counter the global spread of weapons of mass destruction (WMD) and the material and knowledge to produce them.

In the 20 years that have passed since the fall of the Soviet Union, the landscape in which the United States implements CTR activities has shifted. As a result, U.S. CTR programs have been adapting accordingly. What was once a clearly defined challenge—that of securing or dismantling abandoned Soviet WMD material, weapons, and infrastructure—has changed. New threat reduction activities and initiatives are global in nature and no longer focus solely on Russia and the other former Soviet states. A major focus now is countries elsewhere and nonstate actors. The programs boast a larger number of participating member nations. These robust CTR efforts include a wide range of new types of partner organizations, including various U.S. government departments and agencies, international and regional agencies and organizations, academia, industry, and domestic and international nongovernmental organizations.

There are several reasons this is happening. For one thing, there are more, and more diverse, threats and actors, including global criminal organizations, terrorist networks, and violent extremists. Globalization, with its associated advancements in technology and freedom of movement of nonstate actors with intent to do harm, is another challenging factor to achieving a safer, more secure world. To better understand the current state of this critical effort, a historical perspective is helpful.

In the early 1990s, the Soviet Union’s collapse meant that the world faced the challenge of securing a large amount of dangerous nuclear material, including weapons, delivery systems, facilities, and former Soviet scientists with the knowledge to build weapons of mass destruction. Two principal concerns were identified.

First, Belarus, Kazakhstan, Russia, and Ukraine had inherited nuclear weapons and material from the Soviet Union. No longer secured by the Soviets, these highly destructive weapons were vulnerable to pilferage and outright theft by criminal networks and terrorist organizations. Securing known stockpiles of weapons and sensitive nuclear facilities became more urgent than ever.

Second, former Soviet scientists and technicians were unemployed and had no apparent means to support themselves or their families. The level of sensitive information, scientific expertise, and technical knowledge they had was frighteningly high and possibly available to the highest bidder. In response, the U.S. Congress took swift action and approved the CTR program, sponsored by Senators Sam Nunn (D-Ga.) and Richard Lugar (R-Ind.), in 1991.

The original purpose of the CTR program was to facilitate on a priority basis the transportation, storage, safeguarding, and destruction of nuclear and other weapons in the Soviet Union, its republics, and any successor states and to assist in the prevention of weapons proliferation.³

Success in the early days of the CTR program was clearly attainable, in part because several easily recognizable and urgent proliferation dangers commanded the U.S. government’s attention and effort.

The CTR program provided funding and expertise for the destruction of nuclear and other weapons. Nuclear warheads throughout the former Soviet Union were removed from the missiles designed to carry them and decommissioned or stockpiled at designated sites in Russia. The Nunn-Lugar legislation also funded programs to secure whatever nuclear material was left at facilities.

To redirect scientists from the former Soviet Union away from WMD production into peaceful activities, the International Science and Technology Center in Russia and the Science and Technology Center in Ukraine were established. The goal of the centers was to focus these scientists’ contributions on solving national and international science and technology problems, reinforce the transition to market economies, and support basic research. —**BONNIE JENKINS**

ENDNOTES

1. Committee on Strengthening and Expanding the Department of Defense Cooperative Threat Reduction Program, *Global Security Engagement: A New Model for Cooperative Threat Reduction* (Washington, DC: National Academies Press, 2009), www.nap.edu/catalog.php?record_id=12583.

2. U.S. Department of Defense, “Nuclear Posture Review Report,” April 2010, [www.defense.gov/npr/docs/2010 Nuclear Posture Review Report.pdf](http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf).

3. *Soviet Nuclear Threat Reduction Act of 1991*, Public Law 228, 102d Cong., 1st sess. (Dec. 12, 1991), Title II (Soviet Weapons Destruction).

WMD terrorism and proliferation can occur anywhere.

An example of the global scope of programs today is the important effort to secure all vulnerable nuclear material and to do so in a manner that engages the entire international community. This effort was the focus of the nuclear security summit in Washington in April 2010.¹

As CTR programs move into other parts of the world, they must be built on approaches that address the more

dispersed nature of the threat. The unique situation of potential partners, including recognition of the cultural diversity of those partners, must inform the threat reduction strategy used in particular countries and regions. This situation also requires an understanding of the different perceptions of threats held by citizens, including government officials, in other regions of the world and of how the United States can work with them on addressing their threat perception as well as its own.

Combating Nuclear Terrorism

One initiative that is engaging Africa is the Global Initiative to Combat Nuclear Terrorism (GICNT). The threat of nuclear terrorism, as highlighted during the nuclear security summit, is a global threat. Recognizing all states’ shared responsibility for preventing acts of nuclear terrorism, the United States and Russia launched the GICNT in order to build international collaboration to address all facets of the nuclear terrorism threat. The initiative strengthens international



Michael Stafford (left), coordinator of the State Department's Nuclear Smuggling Outreach Initiative, and U.S. Ambassador to Congo James Entwistle (center) confer with a Congolese Foreign Ministry staffer in Kinshasa at the signing by Entwistle and Congolese Foreign Minister Alexis Thambwe Mwamba of a joint action plan on combating nuclear smuggling on December 21, 2010.

security through building the capacity of nations to combat the threat in all regions of the world, including Africa. It is an international partnership of 82 countries and four official observers committed to achieving a broad set of nuclear security objectives, including improving nuclear detection, strengthening nuclear forensics, and denying safe haven and financing to terrorists that may seek to acquire nuclear or radiological materials. Since it was launched in 2006, the GICNT has conducted more than 40 multilateral activities and exercises as well as six senior-level meetings, resulting in strengthened policies, greater information-sharing techniques, and greater transparency and collaboration on security issues among the partner nations.

In Africa, the GICNT has worked with countries to highlight the dangers of nuclear terrorism for all states. The United States welcomes the involvement of Cape Verde, Côte d'Ivoire, Libya, Mauritius, Morocco, the Seychelles, and Zambia in the GICNT, but seeks the involvement of other African nations as well. Morocco is hosting a GICNT exercise on countering radiological threats in March, but unfortunately, Africa remains relatively under-represented in the GICNT.

One of the reasons cited by some African states for nonparticipation is that they do not perceive nuclear terrorism as a

direct threat to their interests. The United States hopes this view will change in the aftermath of last year's nuclear security summit and other related international efforts. Regardless of whether African countries possess fissile material, terrorists can exploit them as transit points for trafficking of illicit nuclear material, rely on brokers and intermediaries in Africa for resources or information, or use nuclear or radiological devices in Africa. Moreover, individuals seeking financing for nuclear terrorism are not confined by any geographical boundaries.

Participation in the GICNT can help develop African countries' capacities that will bolster their efforts in areas beyond countering nuclear terrorism. For example, lessons learned from GICNT exercises could enhance customs and border controls. Through participation in the GICNT, African governments can increase capacity building and networking. More of these expanded opportunities also are available through participation in the Proliferation Security Initiative (PSI).

Border Security a Priority

Another program that the United States is increasingly pursuing in regions around the world is the Department of State's Export Control and Related Border Security (EXBS) program. The EXBS program is the U.S. government's premier initiative to

assist other countries in improving their border and strategic trade control systems, which are crucial in efforts to counter trade of illicit goods and secure all loose nuclear materials.

Through the EXBS program, the United States seeks to prevent WMD proliferation and irresponsible transfers of advanced conventional weapons by helping build effective national control systems over the export, import, transit, and transshipment of strategic items in countries that possess, produce, or supply such items. It will continue to expand its partnerships, including in Africa where the transit of weapons of mass destruction and fissile materials is of concern. As these efforts expand into new regions, including Africa, they must be modified to leverage U.S. national security assistance funds to meet regional needs. For example, in addition to building capacity to prevent trafficking of weapons of mass destruction and related materials, the EXBS program can help African partner governments more effectively prevent and respond to the trafficking of drugs, humans, and small arms—issues of central importance to many African countries.

Although the EXBS program originally focused on the former Soviet Union, it is now active in more than 60 countries worldwide with 21 full-time advisers assigned to posts to supply on-the-ground coordination. The program provides approximately 300 training sessions each year and has donated nearly \$170 million in inspection and detection equipment since 1998. EXBS officers assess countries' capacities and provide extensive training on export control legislation, licensing, enforcement, government-industry outreach, and interagency cooperation to parliamentarians, senior government officials, the judiciary, and frontline licensing and enforcement personnel.

In Africa, for example, the EXBS program hopes to partner with one of the countries with more-advanced strategic trade controls in encouraging and supporting the country's role in mentoring like-minded African states. Given that many of the countries in Africa are at similar stages with respect to strategic trade controls and share concerns about development and competitiveness, the EXBS program plans to conduct more regional activities to help build productive relationships among neighboring countries.

Such relationships would leverage limited resources and promote multilateral progress toward international standards and best practices that recognize common interests and responsibilities.

The EXBS program recently completed a study that found that the implementation of a strategic trade control system helps a country's export growth—a notable finding that contradicts a widely held perception. The establishment of strategic trade control systems also is linked explicitly to high-tech development within a country.

Partnerships in Africa

The PSI is another relatively new global initiative to prevent the proliferation of weapons of mass destruction, WMD-related components, and their means of delivery. Begun in 2003 with 11 like-minded countries, the PSI has grown to include 98 partner nations. It is structured as a collaborative effort to halt WMD trafficking by states and nonstate actors of proliferation concern and uses an innovative and proactive approach to preventing proliferation. It relies on voluntary actions that are consistent with states' national legal authorities and relevant international law and frameworks. PSI partners meet regularly in the context of exercises, expert meetings, and plenary sessions designed to share, develop, and test cooperative procedures that significantly enhance participants' interdiction capabilities.

To date, only Angola, Djibouti, Liberia, Libya, Morocco, and Tunisia are PSI partners from Africa, but the contribution of PSI partners in Africa should not be overlooked. For example, in 2008, Djibouti co-hosted with France a major maritime and port interdiction exercise involving Red Sea and Maghreb countries. Liberia oversees a significant ship registry, and in 2004 the United States and Liberia entered into a bilateral ship-boarding agreement. This agreement provides the modalities for the United States and Liberia to cooperate on preventing shipments of items of proliferation concern aboard Liberian-flagged vessels.

The United States will continue to engage key states in Africa to endorse the PSI Statement of Interdiction Principles. Participation in the PSI by African states not only can prevent the exploitation of strategic shipping lanes by proliferators, but also can help African nations develop

greater capacity to prevent the illicit trafficking of items of proliferation concern and related items.

The Group of Eight (G-8) Global Partnership against the Spread of Weapons and Materials of Mass Destruction is another initiative that should continue to consider greater participation of additional partners, including on the African continent. The Global Partnership is a 10-year, \$20 billion initiative launched at the G-8 summit in Kananaskis, Canada, in 2002 with the aim of preventing terrorists and states from acquiring or developing weapons of mass destruction. There are currently 23 partners in the Global Partnership, including the European Union. They collectively have allocated more than \$18 billion since 2002, and the effort is expected to exceed the original \$20 billion by 2012. Future efforts to be counted under the Global Partnership financial commitments by its members would include biosecurity, nuclear and radiological security, scientist engagement, and capacity-building measures, such as export controls and those captured in UN Security Council Resolution 1540. The Global Partnership is a successful initiative, and the United States is promoting its extension beyond 2012.

Currently the partnership has no partner nations in Africa, Latin America, or the Middle East. Because it is a mecha-

nism that can provide an understanding of the funding countries are putting toward threat reduction efforts, countries that fund this type of work but are not within the Global Partnership today should be included. Regardless of how much funding a country puts toward these efforts, the provision of technical expertise to help develop capacity in partner countries also could go a long way in advancing nonproliferation objectives. Regional perspectives can help enrich donor country planning and coordination. The Global Partnership provides an excellent means for coordination of global threat reduction activities, which can be extended to regions not yet represented.

In terms of global multilateral backing for threat reduction activities, perhaps the most recent, widely recognized, and potentially impactful CTR-related efforts are those that are mandated through UN Security Council resolutions, whose obligations apply to all UN members.

In April 2004, the UN Security Council adopted its most far-reaching resolution to date on WMD nonproliferation. Resolution 1540 established binding obligations on all UN member states under Chapter VII of the UN Charter to take and enforce effective measures against the proliferation of weapons of mass destruction and their means of delivery and related materials. If fully implemented,



Russian customs officers listen as a U.S. Customs and Border Protection officer (left) explains the procedure for checking documents during a rifle shipment inspection at John F. Kennedy International Airport in New York as part of a February 2009 field training for the CBP's International Air Cargo Interdiction Training program.

Department of State

the resolution can help ensure that no state or nonstate actor is a source or beneficiary of WMD proliferation.²

In an effort to increase attention to Resolution 1540 in Africa, in 2010 the United States partnered with the United

government of Congo. To date, this engagement has been fruitful. Representatives of Congo have been open in exchanging views on their capabilities and needs, and they have been enthusiastic about collaborating with the NSOI

PNS currently is engaged with nuclear technical experts from the Middle East and North Africa through regional and bilateral activities. The PNS recently conducted a workshop on developing a civil nuclear power workforce in Egypt,

Representatives of Congo have been open in exchanging views on their capabilities and needs, and they have been enthusiastic about collaborating with the [Nuclear Smuggling Outreach Initiative] and its international partners to address those needs.

Nations and the Kenyan government to bring together 20 states and national science academies for a workshop on implementing Resolution 1540 to protect Africa from bio-threats. The workshop focused on national pathogen security measures, national and regional integrated infectious-disease surveillance and response systems, and efficient laboratory practices for accounting, securing, and protecting biological materials as required by the resolution. Participants discussed concepts of biosecurity and biosafety in detail, as well as means to improve their implementation in the context of fulfilling their national obligations under the resolution.

Similar types of workshops and meetings have taken place in other regions, such as in Latin America and Southeast Asia. Also, there have been Resolution 1540 outreach activities in other forums, such as the G-8, and one is planned for the Organization for Security and Cooperation in Europe.

Fighting Smuggling

The State Department's Nuclear Smuggling Outreach Initiative (NSOI) is partnering with key governments to enhance their capabilities to prevent, detect, and respond effectively to nuclear smuggling attempts. It is developing bilateral joint action plans with the governments, specifying priority steps to be taken to improve those capabilities, and working with the international community of donors to provide and coordinate assistance to these countries to support implementation of the plans.

In Africa, the NSOI has engaged the

and its international partners to address those needs. Through a series of meetings, the NSOI and Congo have developed and approved a joint action plan, which was signed on December 21, 2010, as well as a list of assistance projects to help Congo implement that plan. Implementation of similar joint action plans in other countries has produced tangible improvements in the physical protection of nuclear and highly radioactive materials; in nuclear regulatory systems and export controls; in security at airports, seaports, and land border crossings; in laws to combat nuclear smuggling; in national plans and capabilities to respond to smuggling incidents; and in other key capabilities. The United States anticipates that its partnership with Congo will produce similar benefits.

Because of the sensitive nature of nuclear security, many countries, including some in Africa, are reluctant to discuss their capabilities and needs in this area. Nevertheless, through its engagement process, the NSOI has been able to allay many of those concerns and develop strong relationships with its partner countries. Looking to the future, the NSOI hopes to use its successful track record in Congo and elsewhere to persuade other countries in Africa to join its set of partnerships to combat nuclear smuggling.³

The State Department's Partnership for Nuclear Security (PNS) program provides technical and financial assistance to engage nuclear scientists, engineers, and technicians to improve nuclear security best practices and support the development of a security culture. The

which discussed human capacity development and the steps necessary to build a nuclear workforce consistent with the highest standards of nuclear security, safety, and related nonproliferation objectives. Additionally, the PNS supports collaborative research projects, including one on nuclear analytical techniques and another on medical isotope production in Morocco. It also provides opportunities for professional training and travel grants for experts to attend international meetings.

The U.S. effort goes beyond nuclear scientists. The State Department's Chemical Security Program seeks to reduce the global threat of chemical terrorism by preventing access to weapons, their precursors, and dual-use infrastructure and expertise. It has partnered with the National Research Council and an international panel of chemical industry, academic, and pedagogy experts to create a chemical safety and security teaching manual and tool kit to be used by chemists worldwide. These tools are available in four languages and form the backbone of a global Chemical Safety and Security Officer Train-the-Trainer program. The program currently is working with 15 countries, recently expanded to include North Africa, and is examining ways to engage sub-Saharan Africa effectively.

The Energy Department in Africa

The Department of Energy is continuing its current CTR efforts and its activities beyond Russia and the former Soviet Union. Given its unique assets, including the world-class scientists resident at its



U.S. customs officers demonstrate vessel search techniques during International Seaport Interdiction Training, part of the Export Control and Related Border Security program, at the Thai port of Laem Chabang in January 2008.

national laboratories and their years of experience on the front lines in implementing CTR programs, the Energy Department helps lead the way in implementing CTR on a global basis. The department expends a great deal of funding in the implementation of UN Security Council Resolution 1540, for example and is critical to U.S. border security, Second Line of Defense (SLD), and scientist engagement efforts.⁴

Specifically, in coordination with the EXBS program, the Energy Department's International Nonproliferation Export Control Program (INECP) collaborates globally to strengthen efforts to prevent illicit transfers of materials, equipment, and technology related to weapons of mass destruction. The INECP establishes long-term partnerships with national experts and on-the-ground practitioners who support national export control licensing, industry compliance, and inspections-based enforcement practices. The INECP's current capacity-building efforts in Africa primarily focus on the enforcement arena, aiming to improve capacity to interdict illicit proliferation-sensitive

transfers. Additionally, the INECP's Counter-Trafficking System Development (CTSD) program works with countries seeking to improve border security systems, imparting the tools needed to identify and integrate viable border security system improvements and establishing a foundation for other U.S. government programs to provide more technically difficult WMD-related detection assistance. In Africa, the CTSD program is focusing initial outreach in the East and West African subregions.

In addition, the Energy Department's Global Threat Reduction Initiative (GTRI), which is currently active in 90 countries, helps reduce the threat posed by the proliferation of sensitive nuclear materials and high-risk radiological materials through cooperation with international partners to identify, protect, or remove the material. Other work includes converting research reactors or other civilian facilities that use highly enriched uranium (HEU) to low-enriched uranium (LEU). The program seeks to eliminate HEU as a terrorist target.

In Africa, nuclear material and high-

activity radioactive sources are used for a variety of purposes in agriculture (e.g., irradiators to preserve the shelf life of seeds) and in research reactors for training, assaying minerals, producing medical isotopes, and conducting basic science. South Africa, arguably the most advanced country in Africa in the use of nuclear energy and technology, finished converting its Safari I reactor to LEU fuel several years ago and has begun conversion of its molybdenum-99 medical-isotope production process to use LEU targets. On December 6, 2010, the first commercial shipment of all-LEU-produced molybdenum-99 arrived in the United States from South Africa.

The GTRI continues to work cooperatively with a number of countries to protect or remove other nuclear and radioactive material of concern. Currently, the Energy Department is working on radiological protection and recovery in 100 commercial and industrial facilities in Africa. This includes work in 17 African countries, and work is expected in 26 additional countries.⁵ Particular challenges of the region include some cases of insufficient infrastructure to maintain security systems at peak performance.

Nevertheless, the GTRI is able to offer certain technological incentives and, in most cases, fully covers the costs of security upgrades and material shipments, as well as state-of-the-art equipment for such efforts. The Energy Department also is cooperating with several African nations on the SLD program's Megaports Initiative. That initiative aims to strengthen the capability of foreign governments to deter, detect, and interdict illicit trafficking in special nuclear and other radioactive materials transiting the global maritime shipping system. Under the initiative, the Energy Department provides radiation detection equipment, training, and technical support to key international seaports to scan cargo containers for nuclear and other radioactive materials. The goal of the initiative is to scan as many containers as possible, including imports, exports, and transshipments, regardless of destination and with minimal impact on port operations.

Overall, the Megaports Initiative has installed equipment at 34 ports around the world. In Africa alone, the initia-

tive is close to completing installations in Kenya and Djibouti and will begin implementation in Cameroon soon. In addition, outreach is underway in several other countries in the region.

including the generation of standard operating procedures.

In December 2009, the United States released the “National Strategy for Countering Biological Threats,” which is the

State Department, both in Washington and at U.S. embassies in Africa, as well as with U.S. government agencies and departments, such as the U.S. Agency for International Development (USAID), the

Although U.S. government priorities may be focused on achieving nonproliferation objectives, priorities of partner institutions and governments may lie more with laboratory and public health capacity building.

Through the initiative, the Energy Department promotes capacity building, enhances global supply chain security, fosters a culture of radiation safety and protection, and strengthens nuclear security. Thus, increased emphasis in Africa will be a priority for the program in the coming year.

Health and Human Security

Nowhere in the world is the nexus between health needs and human security more complex than in Africa. African countries contend not only with a host of highly virulent and debilitating diseases that affect their livestock and citizens, but also with a variety of governance, infrastructure, and security challenges. Many of the materials, technologies, and expertise widely available to animal and public health services could be misused to produce a biological weapon. Expanding bioscience capacity has multiplied the risk, as more scientists work with pathogens in low-resource health networks. Increasing numbers of often-unsecured pathogen collections, the proliferation of laboratories, and the lack of expertise in bio-risk management best practices add to the potential for intentional misuse or accidental release of biological agents.⁶ Essential program elements in this region include ensuring that the African Biological Safety Association serves as a centralized regional resource for laboratory biosafety and biosecurity, improving data sharing between human and animal-health professionals, enhancing laboratory diagnostic support for early detection and response to emerging and re-emerging infectious diseases, and raising awareness regarding laboratory biosafety and biosecurity best practices,

guiding principle of the U.S. approach to combating bioterrorism. In his 2010 State of the Union address, President Barack Obama highlighted this “new initiative that will give us the capacity to respond faster and more effectively to bioterrorism or an infectious disease.”⁷

The State Department’s Biosecurity Engagement Program (BEP) promotes the national strategy by enhancing bio-risk management and infectious disease surveillance globally and has deepened its engagement in North Africa, the Horn of Africa, and South Africa. It also has launched new efforts in areas where the terrorist threat and emerging infectious-disease burden are highest, including West Africa and the Congo Basin.

The BEP has worked closely with the Department of Defense’s CTR program, which has expanded the scope of its programming beyond the former Soviet Union into Pakistan and Afghanistan and will soon begin activities in East Africa. To plan for new CTR activities in Africa, the expanded partnership between the BEP and Defense Department CTR program has included several joint scoping trips to Kenya and Uganda, which have allowed the BEP and Defense Department CTR program to develop complementary and harmonized efforts that are closely aligned with host nation priorities. The focus of CTR efforts in East Africa is enhancing pathogen security, expanding infectious disease surveillance in compliance with World Health Organization and World Organization for Animal Health statutes and guidelines, and supporting joint scientific research that is safe, secure, and sustainable. The Defense Department’s CTR efforts in East Africa are coordinated closely with the

Centers for Disease Control and Prevention (CDC), and the Department of Agriculture, and nongovernmental partners and stakeholders also involved in health security activities. Sustainability is an important element that is incorporated into all African bio-engagement activities by both BEP and Defense Department CTR.

The Defense Department CTR program successfully collaborated with other U.S. agencies on “bio-engagement” programs before the latter formally launched activities in East Africa. In December 2010, the BEP and Defense Department CTR program partnered to provide support to more than 20 public health and infectious disease experts from Africa so that they could attend the sixth Training Program in Epidemiology and Public Health Interventions Network Global Scientific Conference, co-hosted in Cape Town by the CDC, South Africa’s Field Epidemiology and Training Program, and the African Epidemiology Network. In September 2010, the United States and South Africa signed an agreement to extend cooperation on Project Phidisa, a groundbreaking clinical research collaboration among the South African Department of Defence and Military Veterans, the U.S. Department of Defense, and the U.S. National Institutes of Health (NIH).

As CTR programs expand to address today’s threats and extend into new regions, the number of U.S. agencies and departments involved will increase. In this respect, the BEP will seek to build on existing support, including leveraging key program partners including the CDC’s Global Disease Detection Center in Kenya, the Agriculture Department’s Agricultural Research Service, the NIH’s National Institute of Allergy and Infec-

tious Diseases, the Defense Department's Naval Medical Research Unit 3, and Sandia National Laboratories, as well as other local program partners. BEP and technical experts continue to visit countries to support programmatic efforts and develop long-term strategies for sustainable regional bio-engagement.

Future CTR efforts must employ a whole-of-government approach, whereby strategies are based on all programs relevant to the U.S. government in a particular region. For future BEP and Defense Department CTR bio-engagement efforts that employ such an approach in Africa and other parts of the world, it is essential that U.S. programs work together to communicate similarly themed messages in a way that acknowledges and respects the autonomy and dignity of partner institutions and governments. Although U.S. government priorities may be focused on achieving nonproliferation objectives, priorities of partner institutions and governments may lie more with laboratory and public health capacity building. Overly focusing on the underlying nonproliferation agenda may draw unwanted attention to prospective partners by highlighting security deficiencies that could potentially be exploited by terrorists or undermining their regional reputations. Clearly recognizing the unique perspectives from which the U.S. and partner governments approach these issues is critical to the overall success of global efforts.

Considerations for the Future

Although much good work on threat reduction has already been done and continues to evolve, the United States recognizes that there is more to do. The ability to adapt and respond to a shifting threat landscape is critical. When it comes to preventing WMD terrorism, the goal can never be less than 100 percent.

Existing international forums, such as the GICNT, Global Partnership, and PSI, must continue to grow in partnership nations and bring into discussion the concerns and issues of new partners around the globe. These forums must continue to build capacity within countries so the global community can combat WMD terrorism. Threat reduction activities must be increasingly global to address a global threat. Continued engagement

also means continued funding.

The United States recognizes that the global financial landscape has changed since 1992. Many nations do not have the funds they might have had years ago to fund this work. With funding tighter, it is imperative to continue to use the available funds for projects that achieve results. This calls for increased cooperation and coordination among nations that are funding threat reduction activities. Transparency regarding the activities of countries and multilateral organizations will minimize duplication and ensure that gaps are filled.

In this respect, it is important to work with agencies and departments that have been working for many years in the regions to which the U.S. threat reduction effort is now reaching out. For example, the CDC and USAID have already been working for years in many parts of the world in which threat reduction programs will be engaged. These organizations have knowledge of the region and its culture, perspectives that must be integrated into any outreach approach.

As threat reduction efforts continue to move into other regions, there will be new challenges, but also opportunities for partners, old and new, to work together to address global problems. Together, the United States and its partners around the world are encouraging many countries to join in building lasting strength and durability into shared global threat reduction programs and moving everyone toward a safer, more secure world. The work so far achieved in Africa and in other regions of the world is helping program managers in the United States and other countries promote threat reduction and partnerships in the most productive and inclusive manner possible. **ACT**

ENDNOTES

1. The 47 countries and three international organizations that attended the nuclear security summit achieved crucial consensus in three key areas: that the danger of nuclear terrorism is one of the greatest threats to the world's collective security; that terrorist networks such as al Qaeda have tried to acquire the material for a nuclear weapon, and if they ever succeeded, they would surely use it; and that the use of such weapons would be catastrophic, causing extraordinary loss of life and striking a major blow to global peace and stability.

2. It is important to note that all states have several important obligations under Resolution 1540. They must prohibit support to nonstate actors seeking WMD-related items and adopt and enforce effective laws prohibiting the proliferation of such items to nonstate actors. This prohibition extends to assisting or financing such proliferation. States must take and enforce effective measures to control these items in order to prevent their proliferation, as well as to control the provision of funds and services that contribute to proliferation. If implemented successfully, each state's actions will significantly strengthen the international standards relating to the export of sensitive items and ensure that nonstate actors, including terrorist and black-market networks, do not gain access to chemical, biological, or nuclear weapons, their means of delivery, or related materials.

3. Related to the NSOI is the work of the Nuclear Trafficking Response Group, which also seeks to include countries from Africa and other regions. The United States provides real-time support to governments responding to nuclear smuggling incidents. The Nuclear Trafficking Response Group works with national authorities to help them secure smuggled nuclear material, prosecute traffickers, and identify the source of diversion through, for example, forensic analysis. Nuclear forensics is an important aspect of security because it can determine the origin of illicitly trafficked material.

4. The SLD program works around the world to strengthen the capability of foreign governments to deter, detect, and interdict illicit trafficking in nuclear and other radioactive materials across international borders and through the global maritime shipping system. The goal is to reduce the probability of these materials being fashioned into a weapon of mass destruction or a radiological dispersal device ("dirty bomb") to be used against the United States or its key allies and international partners. See <http://nnsa.energy.gov/mediaroom/factsheets/nnsassecond-lineofdefenseprogram>.

5. In Asia, the Energy Department is doing this work in more than 600 commercial and industrial sites in numerous countries with future work expected to expand.

6. This nexus of health and security is relevant to U.S. interests because of the United States' ongoing work to improve local disease surveillance, prevention, and treatment capabilities for foreign animal and zoonotic disease threats. (A zoonotic disease is one that is communicable from animals to humans under natural conditions.) The control of animal diseases in Africa is especially critical to this strategy as 60 percent of human pathogens and 75 percent of new and emerging diseases are the result of zoonotic infections.

7. National Security Council, "National Strategy for Countering Biological Threats," November 2009.